



Cover for Protecting a Car Against the Elements

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates generally to vehicle covers that can be temporarily installed on an outer surface of the vehicle, from the ground up rather than from the top down, for protecting the vehicle from, for instance, rising flood waters.

2. Description of the Prior Art and Preliminary Discussion

[0002] A variety of protective car covers types are known in the prior art. Most of the covers are intended to protect the vehicle from typical outdoor weather conditions including UV radiation from the sun, rain, snow, ice or the like. The devices include shelters, temporary or permanent that a car can be driven under. See for instance US patent No. 4,655,236. The majority of the devices seen on the street today are car covers or blankets that cover the top of the car. These covers are generally open at the bottom and fixed by the edges of the covers, through grommets and ties or the like, to the under body or bumpers of the car. See for instance US patent Nos. 6,276,381 and 6,070,629. Even though these prior art covers provide some degree of protection from falling objects and UV radiation the devices do not protect a car from for instance, rising flood waters.

[0003] Rising water can occur during a storm surge generated by hurricanes, the rains from a hurricane, flash floods, extreme high tides and even from a cloud burst. For instance, in cities like New Orleans, located below sea level, a summer thunderstorm may generate enough rain in a

short period of time to overwhelm local sewer or storm drain systems. In such instances, the streets located below sea level quickly become flooded. When these rains occur, motorists do not hesitate to park on sidewalks or other platforms located even slightly above the road. The higher ground provides added distance between the rising water and the bottom door seam of the car. Of course, the effort to gain higher ground is to avoid water damage to the interior, especially to the electrical system and upholstery of the car. None of the protective covers discussed above would prevent flood damage to the interior of the car.

[0004] In addition, after every major hurricane, flood damaged cars are often moved to other states and sold to unsuspecting buyers. The device of this invention will not only protect the car but may prevent this type of consumer fraud as more people adopt the invention or insurance companies provide discounted insurance rates for those consumers that use the device of the invention.

[0005] Thus, the present invention has as its object to provide a protective vehicle cover that effectively protects a vehicle from not only falling objects but rising tide or flood waters and which device is easily installed and removed.

[0006] Another object of the invention is to provide a protective vehicle cover which is lightweight, compact and can be stored for instance in the trunk of a vehicle.

SUMMARY OF THE INVENTION

[0007] The protective vehicle cover of the invention is used to ultimately protect the interior of a vehicle from water damage. The cover comprises a flexible blanket or cover and inherently functions to also protect the vehicle from falling objects; however, the device of the invention can be temporarily installed on an outer surface of the vehicle, from the ground up, rather than from the top down thus protecting the vehicle from rising waters.

[0008] Thus, an embodiment of the invention relates to a method of protecting a car, or other device on wheels from water damage, comprising:

spreading a cover on a ground surface; the cover having a first and second face, and the cover having a perimeter or an endless edge, at least one of the faces is positioned facing the ground; positioning a wheeled device over said back face of the protective cover so that said cover in the spread out position is capable of enveloping the car from the ground up; and lifting the endless edge of the protective cover so that the protective cover covers at least the bottom seams of the of the vehicle.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a front, perspective view of a preferred embodiment of the protective cover of the invention attached to and covering a vehicle;

[0010] FIG. 2 is a plan view of the protective cover of the invention showing grommets and rope.

[0011] FIG. 3 is a view showing a reinforced section of the cover of the invention.

[0012] FIG. 4 is an alternate means for securing the cover to sides of the car protecting it only from a rising tide or flood waters and not from falling elements.

DETAILED DESCRIPTION OF THE INVENTION

[0013] FIG. 1 shows a protective vehicle cover 12 of the invention covering an automobile 10, the shape of which is easily discerned. As shown in FIG. 1, the protective vehicle cover 12 can be used to protect outer surfaces of a vehicle including the hood, roof and trunk of the vehicle from rain, leaves, hail and other falling objects. More importantly the cover will, from the ground up, protect the exterior and the interior of the car from for instance a rising tide or flood waters.

[0014] The cover more particularly shown in FIG. 2 not only covers all portions of the sides of the vehicle and its top it will also separate the tires and the undercarriage of the car from the local environment. This is achieved by positioning a wheeled vehicle on top of a face 13 of the cover and picking up the perimeter 18 of the cover so that a majority of the perimeter 18 is on or near the top of the car 10. In this manner the entire vehicle is enveloped by the cover. In enveloping a wheeled vehicle as shown in FIG. 1, water accumulating in depths around the car would be unable to seep through the door sills or other cracks of the car and into the interior of the car. The vehicle cover of the invention enveloping the car from the ground up rather than from the top down would prevent the rising water from gaining access to the interior of the car. A breach would only occur if waters reached the top of the car which would then pour through the folds of the car cover on top of the car. Of course, such a breach would occur in extreme cases of flooding in which case the car is also likely to be swept away.

[0015] The prior art devices are incapable of even providing a modicum of protection against rising waters. The cover of the invention as shown in FIGS. 1 and 4 is drawn upward toward the roof of the car and therefore is not pendent from the top down as is a conventional car cover device.

[0016] The flexible blanket or cover 12 can be comprised of any water proof material of sufficient strength, length and width to at least serve as a functional cover for a single use. A distal end 20 and proximal end 22 of the cover are similarly shaped and narrower than the body portion or mid section 24 of cover 12. The two ends are generally rounded and distal end 20

representing the front of the device 12 may be more elongated and wider than proximal end 22, the rear of the device, as shown in FIG 2.

[0017] As shown in FIG. 2, the flexible cover of the invention may be substantially symmetrical in both the x and y directions. The x- and y-axis are shown in FIG. 2 for purposes of illustrating grommets 28 or eyelet positioning and do not form a part of the invention.

[0018] Most of the thirty grommets shown are in sets of two. For instance grommets “a” and “b” are a paired set of grommets as are grommets “a’ ” and “b’ ”. As can be seen, equal numbers of grommets are found on either side of the y-axis and paired sets on one side of the y-axis have a corresponding paired set of grommets on the other side of the y-axis. As described, a grommet set, for instance grommet set “g” and “f” on one side of the y-axis generally correspond to a grommet set on the other side of the y-axis grommets “g’ ” and “f’ ”. These paired sets are identified by like letters. An equal number of grommets are positioned on the two halves of the cover separated by the x-axis. Thus, folding the cover about the x-axis will generally have grommets from one side thereof positioned on top of the grommets from the other side.

[0019] As shown, distal end 20 has four unpaired but symmetrically located grommets (m, n, n’ and m’) about the perimeter 18 of cover 12 and positioned at the proximal end 22 are grommets p and p’ located inside, relative to perimeter 18 of the first sets of described paired grommets a b and a’ b’.

[0020] The grommets 28 may be plastic or metal or ceramic and may be manufactured from other materials, from for instance, composites. The grommets 28 are designed to receive any convenient fastener for attaching the blanket about the vehicle.

[0021] A preferred convenient fastener is rope 30 having ends 31 and 32 shown in FIG. 2. The rope is threaded, for instance by sticking end 31 through eyelet "a" via the bottom face (not shown) of the cover and looping it over and through its paired eyelet "b". In a like manner, rope end 32 is threaded by sticking end 32 through eyelet "a' " via the bottom face of the cover and looping it over to and through its paired eyelet "b' ". The two ends are then treaded up trough eyelets c and c' and threading continues in this manner through eyelets k and k'. Thereafter the ends are crossed as shown.

[0022] In a preferred method of the invention, after or before threading the rope, a car or other wheeled vehicle is rolled onto the midsection 24 of the cover 12. The perimeter section of the distal end 20 is then taken up onto the car hood or front roof (this end may be held in place with magnets sewn into the cover) and the perimeter section of the proximal end is taken up onto the trunk or back roof of the vehicle. The ends of 31 and 32 of rope 30 are pulled to gather the perimeter 18 and reduce the opening now created. See Fig. 1 wherein the top of the car is seen in the opening created by the spaced apart distal and proximal ends. Rope 30 can then be threaded in any manner through the four eyelets, m, m', n and n' on the distal end 20 of the flexible cover 12 and also through eyelets p and p' of end 22. In this manner the distal end will be laid upon the proximal end (or vice versa depending on the order of treading) shielding the top of the car

from rain or UV radiation. Stays 48 and 49 are a preferred means of maintaining rope 30 in place and keeping the cover over the car. The rope ends are threaded through holes (not shown) in the stays. Spring followers (not shown) engage the rope and hold the stays in place on the rope keeping the rope taught and the perimeter sections of the cover held together. Of course, other types of stays will work in a pinch. Even binder clips may serve the function of keeping the rope from slipping and exposing the car to an opening car cover. Tying the ends of ropes together will also serve the same purpose. One of ordinary skill in the art will also appreciate the fact that a heavy duty zipper, or snaps, VELCRO brand ties, buttons, and magnets can be used to secure the perimeter thus closing the opening. VELCRO brand ties would be most convenient.

[0023] In another embodiment of the invention the car cover 12 can be secured to the car by bungee cords 44 or straps 46. Bungee cords have hooks for grabbing a grommet at one end and each end of the vehicle-mounting straps can be clipped to the grommets 28 of the cover. The vehicle-mounting straps are flexible, preferably made of a strong woven fabric, and preferably adjustable through the use of tightening buckles or threading plates (not shown). Such elements are well known among those skilled in the art. In this manner the cover need only be drawn up as high as for instance the bottom of the windows. And this configuration of the cover is also likely to keep water from entering the door sills of the car.

[0024] The bungee hook at an opposing end of the bungee chord relative to the grommet end will attach to projections, gaps, loops or other accessible features on the upper body surface of a car.

[0025] Depending on the features to which these fasteners are attached, the fasteners may assume a variety of forms, including hooks as described, or rings, loops, anchors, or any of various other shapes. The fasteners on the straps, for example, may be attached to features such as a rain gutter over side windows of a vehicle, or they may be hooked into the gaps or seams at for instance the gap where a window retracts into the door, or the gap between the hood and the front windshield. Other features include the gap found between the back roof section of a family van and the door that opens upwardly. Such features are also found on Pick up trucks where the top sides of the cargo bed have built-in hold-fasts, and the fasteners may be inserted or clipped directly to such members.

[0026] In another embodiment of the invention, the flexible car cover 12 as shown in FIGS. 1-4 could be of a single ply of flexible water proof plastic having a first face and a second face or it may include a first ply and second ply. The respective plies of car cover 12 are preferably superposed and laminated to one another forming a first face of the cover and a second face. Any convenient water proof material can be utilized to form the respective plies of the blanket but thin film plastics, such as commercially available polyolefin materials are preferred. The bottom ply is preferably a woven vinyl plastic that forms a decorative outer appearance for the cover when the cover is attached to the outer surface of the vehicle. This ply is preferably a material selected from the group consisting of nylon, vinyl plastics and polyolefins.

[0027] A single ply device may be of from about 2-20 mils thick and a two ply design may be of the same thickness. The single ply device can be an extruded sheet whereas the two ply device is formed by heating and feeding the two plies together through a nip formed between two rolls. The temperature employed will depend upon the material selected and it is usual practice to heat at least one of the films, and preferably both of the films to near the fusion temperature of the films which, in the case of ordinary polyethylene is approximately 270 degrees F. It will be appreciated that the flexible blanket plies could be adhered by other than by a heat laminating processes.

[0028] In another embodiment of the method of the invention, the flexible cover could be an off the shelf tarpaulin. For instance, the W.W. Grainger catalog describes a blue polyethylene Tarpaulin, Cut Size 20 x 30 Feet, Thickness 5.1 Mils, Finished Size 19 Feet 2 Inches x 29 Feet 6 Inches, Color Blue see <http://www.grainger.com/Grainger/searchresults.jsp> and click on product no. 5W119. or see <http://www.tarpsonline.com> Tarpaulins of larger sizes are also available and

- contemplated by this invention The Grainger tarpaulin comes with grommets already in position.

[0029] In the preferred method, the tarpaulin is placed in the street. A cord or rope is threaded though the grommets. Both ends of the cord can be threaded through the grommets working from the back to the front as described above. Additional grommets can be added as needed to finally secure the tarp perimeter to the top of the car. Or threading can be accomplished by starting at a first grommet, threading it around the perimeter of the tarp and ending generally with the last grommet adjacent the first grommet. A knot is to be tied in the end of the chord not being threaded to stop the cord from unthreading as threading is accomplished. The tarpaulin is laid out

flat and a car or other wheeled vehicle is driven over the tarpaulin and comes to rest roughly in the middle of the tarpaulin. The perimeter of the tarp is drawn up over the top of the vehicle and the cord is pulled tight to draw the perimeter together. Such a tarp in the described position would prevent flood waters or rising waters from entering the interior of a car.

[0030] In the embodiment shown in FIG. 3, the cover 12 has a reinforced section 50. The reinforced section is approximately the width of a wheeled vehicle to be covered, and it extends, for instance from a perimeter section at the proximal end 22 of the cover 12 in the direction to the distal end. The reinforced section has a length at least equal to a car length and at most a length that reaches to the opposite perimeter section of the cover. The width of the midsection may equal to, less than or greater than the width of cover 12. The width of the reinforced section should be slightly greater than the width of a wheel base of a car to be covered. The reinforcement section may be composed of the same or different materials than any ply making up the cover as above discussed. The reinforced section may be sown directly to top face 13 of the cover or to the top face of ply that becomes face 13. This reinforced section may be two strips of fabric or plastic ply separated from one another by the width of a vehicle's wheel base and each strip should preferably be wider than the tires on the wheels of the automobile. Of course the reinforced section is to accept repeated passes of the car over the flexible cover to prevent a hole or breach that would expose the automobile to rising or flood waters.

[0031] It should also be understood that it is possible to reposition the cover 12 so that the cover shown in Fig. 1 can be secured not at the top of the car but for instance near the top of a window

to avoid climbing on the top of the car. It is also possible to reposition the cover 12 to cover the car 10 from the top down rather than from the bottom up. However, this is not the preferred use of the invention and it is not the method of this invention.

[0032] While the invention has been shown in a sample of embodiments including its best mode it is not thus limited and may be changed and modified without departing from the spirit and scope of the invention as above described and below claimed.